

REMARKS

Claims 1-27 are pending in the application. New claim 28 has been added to the application. Therefore, claims 1-28 are at issue.

Claim 1 has been amended to recite that the flexible absorbent sheet “consists essentially of” recited components (a) and (b). This amendment will be discussed more fully in connection with the rejection of the claims under 35 U.S.C. §103.

Claim 14 has been amended to delete a “nonwoven fiber” from the list optional ingredients.

New claim 28 recites a fluffless, flexible absorbent sheet comprising (a) and (b), as recited in claim 1, and one or more optional ingredient (c). New claim 28 also recites that the absorbent sheet is free of fibers. Support for new claim 28 can be found in original claims 1 and 26, and the specification, page 8, lines 10 and 11, and page 20, lines 35-38 (fluffless).

The recitation of “free of fibers” in claim 28 can be found throughout the specification. For example, claim 1 recites that the flexible sheet can contain 100% of (a) and (b), thereby excluding fibers. Also see specification, page 8, lines 7-10, and page 19, lines 9-14. The recitation in new claim 28 of “free of fibers” is specifically supported in Examples 1 and 2, at pages 23 and 24 of the specification, each of which is free of fibers. Also see the specification at page 34, lines 3-14, and page 37, lines 17-25, each disclosing the preparation of an absorbent sheet *without* fibers. These examples and disclosure show that the inventors had possession of the claimed subject matter of claim 28 at the time of filing the application.

It is further submitted (a) that new claim 28 fully conforms to 35 U.S.C. §112, first paragraph, because the specification provides a proper written description and is enabling, and (b) that this amendment does not introduce new matter into the application. Examples 1 and 2, and the specification at page 34, lines 3-14 and page 37, lines 17-25, show individual multicomponent SAPs particles, with a plasticizing component, are formed into a sheet in the absence of fibers.

Applicants not only demonstrated that they possessed the presently claimed invention of claim 28 at the time of filing the application, thereby complying with the written description requirement, applicants also have enabled persons skilled in the art to make and use the invention. In particular, applicants provide examples free of fibers, *and* applicants specifically teach how to make the flexible absorbent sheets in the absence of fibers at Examples 1 and 2 and the specification, page 34, lines 3-14, and page 37, lines 17-25. Note that the flexible sheets of Examples 1 and 2 and the specification, page 34, lines 3-4 and page 37, lines 17-25 also are free of cellulose fibers, i.e., are fluffless. Therefore, applicants not only provided examples of the presently claimed invention, but also specifically provided instructions to persons skilled in the art as to how to make a presently-claimed fluffless, flexible absorbent sheet.

The examiner may be concerned that the specification does not specifically state the term "free of fibers," but it is settled law that a claim term does not have to be recited *in haec verba* in the specification. To comply with 35 U.S.C. §112, first paragraph, all that has to be demonstrated is whether applicants' disclosure has conveyed sufficient information to those skilled in the art that the applicants invented the claimed subject matter. Applicants have met this burden throughout the present specification and in particular in Examples 1-2 and page 34, lines 3-14 and page 37, lines 17-25 of the specification. As stated in MPEP §2163, "[I]t is now well accepted that a satisfactory description may be in the claims *or in any other portion* of the originally filed specification" (emphasis added). Support for a claim limitation can be express, implicit, or inherent.

Applicants have provided sufficient information in the disclosure to inform those skilled in the art that applicants invented the claimed absorbent sheet of claim 28. Only flexible sheets free of fibers, as claimed, are provided as examples. The MPEP goes on to state that the claimed invention can be described in words, structures, figures, diagrams, and formulas. Possession of the invention also may be shown by a reduction to practice, including testing of the claimed invention, which applicants have done in Examples 1 and 2 and in the tests set forth at pages 29-44. Also see the sheets prepared at page 34, lines 3-14, and at page 37, lines 17-25, for example, wherein no fibers are present.

A contention that the term "free of fibers" must be recited in the disclosure in order for the specification to contain a basis for the term is not sustainable. This reasoning has been found clearly erroneous in *In re Wright*, 9 U.S.P.Q.2d 1649, 1651 (Fed. Cir. 1989), wherein the court stated:

"...in *In re Smith*, 481 F.2d 910, 914, 178 U.S.P.Q. 620, 624 (CCPA 1973). As our predecessor court said in that case:

The specification as originally filed must convey clearly to those skilled in the art the information that the applicant has invented the specific subject matter later claimed. *In re Ruschig*, supra, 54 CCPA at 1559, 379 F.2d at 996, 154 USPQ at 123. When the original specification accomplishes that, regardless of how it accomplishes it, the essential goal of the description is realized.

In deciding the issue, the specification as a whole must be considered.

As also pointed out in Smith and as admitted by the board, "the claimed subject matter need not be described in haec verba in the specification in order for the specification to satisfy the description requirement." The fact, therefore, that the exact words here in question, "not permanently fixed", are not in the specification is not important. From the wording of the examiner's rejection it would seem that the did not know that; at least he wanted to be shown an "unequivocal teaching" that the microcapsules are not permanently fixed."...

...All of this convinces us that it is of the essence of the original disclosure that the microcapsules are "not permanently fixed" to their various supports. The examiner was therefore wrong in his underlying premise that the limitation added to the claim by amendment contained "new matter".

The specification does unequivocally teach the absence of permanently fixed microcapsules. The §112 rejection was clearly erroneous and cannot stand. There is clear compliance with the description requirement."

Therefore, considering the present specification as a whole, particularly in light of the information disclosed throughout the specification and in the examples, applicants have adequately informed those skilled in the art that the flexible sheet is free of fibers. See MPEP, § 2163, II, A, 2, wherein the entire specification, including specific embodiments should be considered.

Claims 1-8, 11, and 13-27 stand rejected under 35 U.S.C. §103 as being unpatentable over Melius et al. U.S. Patent No. 6,323,388 ('388) in view of Beihoffer et al. U.S. Patent No. 6,072,101 ('101). Claim 9, 10, and 12 stand rejected under 35 U.S.C. §103 as being unpatentable over the '388 patent in view of the '101 patent and further in view of Brueggmann et al. U.S. Patent No. 6,051,317 ('317). The examiner contends that, because the '388 patent discloses an absorbent sheet comprising a standard superabsorbent polymer (SAP) and a plasticizing component, and because the '101 patent discloses multicomponent SAPs, it therefore would have been obvious to substitute a multicomponent SAP of the '101 patent for the SAP of the '388 patent in the preparation of a flexible sheet. In view of the amendments to claim 1 and claim 14, it is submitted that these rejections are in error and should be withdrawn. It also is submitted that new claim 28 is free of the combination of cited references.

The '388 patent discloses an absorbent article wherein the "retention portion (48) includes a wet-formed mixture of fibers and superabsorbent material" ('388 patent, abstract). Retention portion (48) of the '388 patent is equivalent to the presently claimed flexible absorbent sheet. Also see, '388 patent, column 3, lines 49-51, stating that the retention portion (48) is a material of "a mixture of fibers and superabsorbent material". Also see '388 patent, column 8, lines 52-55; column 9, line 1 through column 10, line 4; and column 11, lines 1-4 and lines 43-46.

The '388 patent therefore teaches that the fibers are an essential ingredient of retention portion (48). The reference teaches that the superabsorbent material accounts for at least about 0.5% up to about 80%, by weight ('388 patent, column 11, line 43 through column 12, line 74) of retention portion (48). Therefore, a retention portion (48) of the '388 patent contains from about 20% to about 99.5%, by weight, of fibers.

In direct contrast to the teachings of the '388 patent, the presently claimed flexible absorbent sheet is *free* of particles. Applicants recitation in independent claim 1 of the phrase "consisting essentially of" (which eliminates fibers considered essential by the '388 patent from the flexible sheet). *In re Herz and Willis*, 537 F.2d 549, 551-2 (CCPA 1976), states:

"In re Janakirama-Rao, *supra*, this court held that the phrase "consisting essentially of" limits the scope of a claim to the specified ingredients and those that do not *materially* affect the *basic* and *novel* characteristic(s) of a composition. It cited *Ex parte Davis*, 80 USPQ 448 (Pat.Off.Bd.App. 1948), which appears to have been the first published opinion construing the phrase "consisting essentially of" and quoted approvingly the following portion of the opinion:

*In the present case where the claims recite three ingredients and the reference discloses four, the important question is whether the term "consisting essentially of" excludes that fourth ingredient. We think that it does, since the "modifier" materially changes the *** fundamental character of the three-ingredient composition [Emphasis added].*

In *Davis*, the material change of fundamental character was from a normally nontacky heat- or solvent-activatable adhesive that formed a strong, heat-resistant bond to a normally tacky and pressure-sensitive adhesive that formed a weak, temporary bond." (Emphasis added).

The above-recited excerpt from *In re Herz*, which in turn cited *Ex Parte Davis*, clearly states that the phrase "consisting essentially of" excludes additional ingredients that materially affect the basic and novel characteristics of a composition, or ingredients that materially change the fundamental character of the composition. The test is *not* one of showing a deleterious effect. In *Ex Parte Davis*, the exclusion of an ingredient *changed the character* of the adhesive from a nontacky and strong adhesive to a tacky and weak adhesive. The omission of an ingredient therefore *changed the fundamental character* of the prior art composition. Similarly, the addition of the omitted ingredient would not be deleterious but would change the fundamental character of the composition. Adding the omitted ingredient *changed* the character of the adhesive from tacky to non-tacky. Either composition is useful.

As stated *In re Herz*, the test is *materially affecting the basic and novel characteristics* of a composition. The '388 patent stated that a recited ingredient (*i.e.*, fibers) is an essential ingredient of retention portion (48). Therefore, exclusion of such an essential ingredient would necessarily affect the basic and novel characteristics of the disclosed compositions. Furthermore, the '388 patent does not teach or suggest *any* retention portion (48) that is free of fibers.

In the present case, the presence of fibers does materially effect the basic and novel characteristics of the flexible sheet. A major goal in absorbent articles, such as diapers, is thinness (see specification, page 2, lines 3-17). To achieve substantial thinness, a fluff and fibers must be excluded from the absorbent portion of the diaper. However, achieving an absorbent sheet having a high percentage of SAP (to achieve thinness) has not been achieved until the present invention (see specification, page 2, line 18 through page 5, line 6.)

A present flexible sheet is free of fibers, can be formed as a continuous sheet, has good absorbency properties, *and* provides a thin absorbent sheet. The inclusion of fibers would, at least, increase the thickness of the absorbent, and accordingly materially affect the basic and novel characteristics of a claimed flexible absorbent sheet.

Because the '388 patent teaches the criticality of including fibers, the fibers *must* affect the basic characteristics of the compositions disclosed in the '388 patent. Accordingly, the inclusion of fibers would necessarily affect the basic and novel characteristics of the presently-claimed flexible sheet. It is submitted therefore that the "consisting essentially of" language in claims 1-27 excludes fibers, which are components that, by law, would materially affect the basic and novel characteristics of the presently claimed flexible sheet. In addition, applicant has shown the improvements achieved by excluding fibers, which would not have been obvious in view of the teachings of the '388 patent. The '388 patent clearly teaches away from excluding fibers from retention portion (48), and discourages persons skilled in the art from excluding fibers. In fact, the '388 patent teaches that incorporating fibers is essential to the disclosed invention.

The '101 patent fails to overcome the deficiencies of the '388 patent. In supporting the present rejection of the claims, the examiner contends that it would have been obvious to substitute the multicomponent SAP particles of the secondary '101 patent for the conventional SAP particles of the primary '388 patent, and thereby arrive at the presently claimed invention.

The '101 patent is directed to a single particle containing both an acidic resin and a basic resin. As disclosed in the '101 patent, neither the acidic resin nor the basic resin alone performs as an SAP. However, when combined together in the same particle, the

resulting multicomponent particle is an excellent SAP. The '101 patent also has disclosure relating to a mixture of acidic resin particles and basic resin particles. Therefore, the most that can be achieved by an arguable combination of the '388 patent and the '101 patent is to substitute the multicomponent SAP particles of the '101 patent for the standard SAP particles of the '388 patent.

The present claims recite a flexible absorbent sheet that excludes fibers. The combination of the '388 and '101 patents therefore does not render the present claims obvious. The '388 patent fails to teach or suggest an absorbent sheet free of fibers, but to the contrary explicitly teaches that the fibers are an essential ingredient. The '101 patent is totally silent with respect to the preparation of absorbent sheets, but rather discloses the formation of particles having microdomains of an acidic resin and microdomains of a basic resin in the same particle and discloses a mixture of acidic resin particles and basic resin particles. No absorbent sheet is disclosed, let alone an absorbent sheet that excludes fibers.

More importantly, the '388 patent specifically *requires* fibers to achieve the benefits of the invention. Accordingly, persons skilled in the art would have had no incentive from a combination of the '388 and '101 patents to prepare a flexible absorbent sheet that is free of fibers with any reasonable expectation of providing a useful flexible absorbent sheet. It is submitted therefore that the rejection of claims 1-8, 11, and 13-27 under 35 U.S.C. §103 over a combination of the '388 patent and '101 patent is in error and should be withdrawn.

With respect to claims 9, 10, and 12, the '317 patent does not overcome the deficiencies of the '388 and '101 patents discussed above. Claims 9, 10, and 12 are preferred embodiments of the present invention. However, applicants do not rely solely upon the features of claims 9, 10, and 12 for patentability, but rely upon all the features of both claims 9, 10, and 12 *and* independent claim 1 from which they depend. Accordingly, it is submitted that claims 9, 10, and 12 are patentable over a combination of the '388, '101, and '317 patents for the same reasons claim 1 is patentable over a combination of the '388 and '101 patents.

It is submitted that the claims are in proper form and scope for entry and allowance. An early and favorable action on the merits is respectfully requested.

Should the examiner wish to discuss the foregoing, or any matter of form in an effort to advance this application toward allowance, the examiner is urged to telephone the undersigned at the indicated number.

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Respectfully submitted,

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